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ABSTRACT

Simple digital devices and methods are described for reducing electromagnetic interference even where a clock signal to the device is rapidly turned ON and OFF. A primary clock signal drives a signal selector. A signal delay is included to provide delayed clock pulse signals. The signal delay detunes the primary clock signal. By repeatedly switching the delay in and out of the clock signal path, a first signal is generated having a frequency at or about the clock signal, and, a second signal is generated which is displaced slightly from the first signal, but still at or about the clock frequency. By repeatedly switching the delay in and out of the primary clock signal path at a rate greater than the frequency of the clock signal, smaller portions of each primary clock pulse may be parsed for subsequent reaggregation to create a spread spectrum clock signal. As a result, a plurality of spread spectrum clock signals at varying frequencies may be created to spread the energy of the signal over a broader spectrum, thereby lowering the signal energy peak to minimize radiation of electromagnetic emissions at undesirable levels.